

EDITORIAL.

THERE ARE many advantages in being in the current of the world's activity. Botany is restrained in its development, and shorn of just recognition, because its representatives are still largely willing to paddle about in quiet bayous, content with the richness of botanical materials and the opportunity of uninterruptedly studying them, without giving a thought to the great interests involved in the surging, pushing mass of commerce and daily traffic which pass near by, accompanied by the noise of enginery and the display of competition. A well known botanist, who has occupied a public position for many years, explained to the writer some time ago that he preferred to go without much needed facilities in the way of books, room and assistance rather than make a request for them or do anything that would attract the attention of the politicians, who would probably abolish the office or bring about some calamity if they remembered that he was in existence. This feeling is a survival from the old days when the botanist was a scholarly recluse, and neither he nor any one else dreamed that his knowledge could have a cash value. Botany was taught then, and is often taught now, as Arabic or quaternions are taught, not because it would help one to gain a livelihood, but for its disciplinary and educational value.

A MIGHTY CHANGE has overtaken the spirit of the botanist in recent years. He has emerged from his herbarium den, and looks at the world with a clear eye instead of constantly peering through a magnifier at a bit of unrecognizable vegetation; he is occasionally seen in cultivated fields, instead of prowling through thickets and out of the way marshes; he speaks like a man who is watching for an opportunity to develop a new industry, and no longer acts as if he fully believed that industries and botanical science are unrelated and incompatible.

But the transformation is not complete, in fact it is only so far along as to make its tendencies clearly recognizable. There are still good botanists who will not admit that there is any actual change. They are content that the study of the food of plants should be carried on by chemists, the investigation of the laws of breeding and practical treatment of diseases by horticulturists, the relation of plants to heat, light and electricity by physicists, the study of bacteria by pathologists, the examination of fossil plants by geologists, and so on. In repudiating the connection of these and other lines of investigation

with the science of botany, especially where a practical or commercial end is in view, the botanist loses the advantage derived from popular approval. It is more difficult to obtain ten dollars to equip a laboratory for vegetable physiology than a thousand dollars for a laboratory of chemistry, because Baron von Liebig and others long ago fully convinced the popular mind that a knowledge of chemistry was essential to an intelligent pursuance of most of the arts and industries. And so thoroughly was this done that every man, even to the present day, although he may not know the names of the elements, associates chemistry with the indispensable in education, while he has hazy, if any, notions about vegetable physiology or its application. A Liebig is needed in botany.

IT IS A SOUND principle in advertising that having an article of genuine worth and general utility the profit from it will be in proportion to the extent to which it is made known. Botany, both as a fundamental and as an applied science, is in some respects like a commercial article. The better its merits are known the greater its income will be in the way of money for teaching equipment, for laboratories, for research, for salaries, for assistance, the more and varied the demand for botanists, in short the greater activity and the greater possibilities.

The progress already made toward creating a need for botanists in the commercial world is considerable, and is every year increasing the demand for well trained men. At present the most promising field is vegetable pathology. In this line the action of the orange growers of Florida is significant. They have endorsed and substantially aided the Sub-Tropical Laboratory at Eustis, and recently have formed a stock company to send a botanist around the world to collect and study citrus and other sub-tropical fruits, to observe their diseases, and in every way possible to make available whatever knowledge an able botanist can gather with practically unlimited resources. A method of caring for orchards and vineyards, likely to be introduced by some enterprising community, is the employment of a pathologist to take charge of the health of the plants, spray them at suitable intervals, and to be on guard against parasites. There are at present many ways in which botanical knowledge can be made to yield a livelihood beside teaching. The greater and more diversified the demand for men trained in botany becomes the better it will be for all branches of the science, and for all its devotees.